



Project: 617695-EPP-1-2020-1-ES-EPPKA2-CBHE-JP

# GEOTAK 2<sup>nd</sup> REPORT

## **INTERNAL QUALITY CONTROL**

WP4

Report title: Quality Assurance Plan. Deliverable 4.1.

Related work package: WP 4: Quality Plan

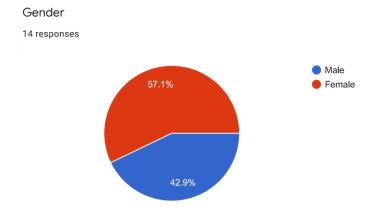
Work Package Leader: VUB Date of issue: April, 2022 Dissemination Level: Restricted

#### **INTRODUCTION**

During the first half of 2022, two trainings have taken place – one virtual and one face to face. The following report gauges the results of the answers obtained from questionnaires delivered electronically via google docs.

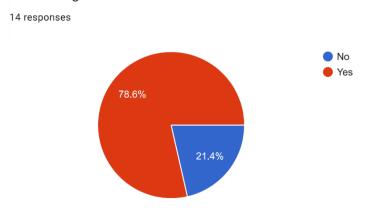
#### FEEDBACK TT1 GEOTAK 22-24 MARCH 2022 OSH/BISHKEK

Due to the current conflict Russia-Ukraine, Armenian partners were not able to travel to Kyrgyzstan since Aeroflot stopped operations and there was no viable alternative to travel in those dates. Therefore, 100% of respondents were from Kyrgyz origin. The questionnaire was filled by 14 persons from which 57% were female and nearly 43% male. The gender balance could be considered thus satisfactory.



Most of participants had already previous knowledge on GIS/GIT. Nearly 80% of participants had received already some formation in the topics undertaken.

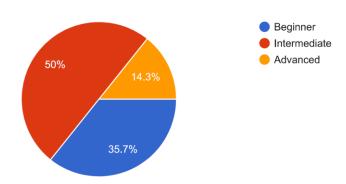
Have you completed any other similar course in this field before taking this training?



This is further correlated by the percentage of people signalling an intermediate or advance level of knowledge in GIS/GIT – 85%. Only 14% of participants considered themselves as beginners. Therefore we would expect a training at intermediate-advanced level.

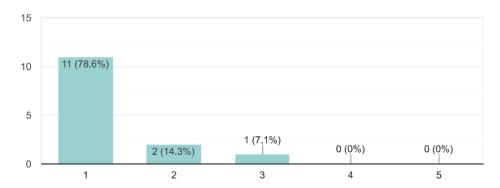
What is your level of knowledge in remote sensing?

14 responses



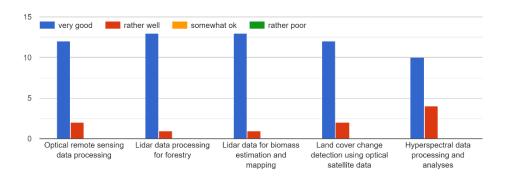
All participants were satisfied with the time, form and content of agenda which was duly distributed before the event took place. The main reason for participating in the training was to extend knowledge on GIT and apply it the research interest of the participants.

The assessment of respondents on the technical infrastructure to conduct the trainings was very positive. Nearly 80% of respondents were vere satisfied and 14% satisfied. Nobody commented negatively about the technical resources (equipment, labs) to conduct the training sessions.



Likewise, the majority of respondents (around 85%) rated very positively the training sessions. The session that received relatively lower positive rate was related to hyperspectral data processing and analysis.

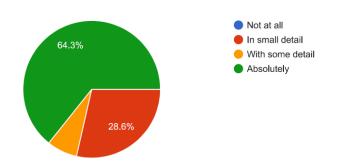
how would you rate the following training sessions?



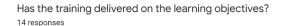
There was some disagreement about the extent that information on learning objectives for the training session was shared. For a majority (two thirds) the learning objectives of the training were clear from the beginning but one third of respondents declared to have received only brief details about them.

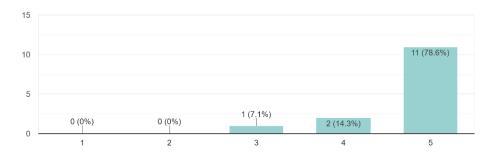
have the learning objectives been identified at the beginning or before the training?

14 responses



Nevertheless, all the participants except one were very satisfied with the results of the training sessions organised by OTU.





### **CONCLUSIONS**

What participants like the most from the training was the following elements:

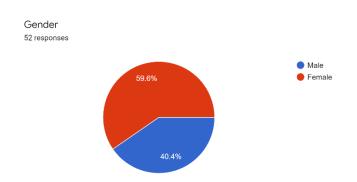
Practical work with software
Remote sensing data processing
Analysing multispectral Sentinel images
Building models based on data
Lidar data processing for forestry

What participants like the least from the training was slow internet connection to download images and one participant expected to receive more practical exercises and drills.

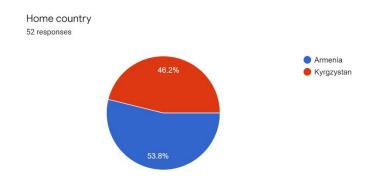
The train-the trainer in OUT was positive and served to improve knowledge and skills from previous education of participants. They got acquainted with new software for analysing satellite imagery analysis and they considered to have received lot of new information regarding GIS/GIT. One of the participants asserted that he would try to use all info from this training into his teaching for students, esp. practical work on Copernicus, QGIS, using Semi-Automatic classification plug-in, FUSION, Weka, and MultiSpec particularly.

#### FEEDBACK FROM VIRTUAL TRAINING 2-10 FEBRUARY 2022 on REMOTE SENSING

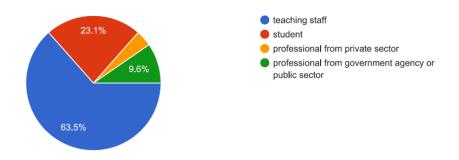
In terms of description of participants, there was a high number of participants and respondents (N=52). It was glad to observe that female participation was highly satisfactory at nearly 60% while male participation represented 40%. This rate is aligned with the goals of the project.



The participation according to countries was quite balance with nearly 54% representation of Armenians and 46% of Kyrgyz participants.



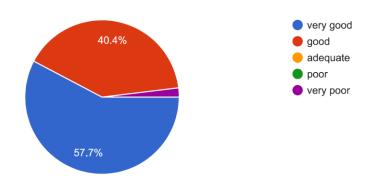
The bulk of participants were teaching staff with some small number of representatives from government and private sector as well as 23% of students (at post-graduate or doctoral level).



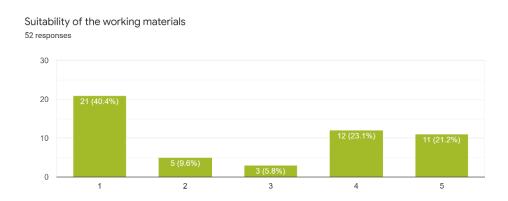
In terms of facilities and technical support, most respondents considered the platform for training either very good or good (98%).

Suitability of the working environment (e.g. virtual communication platform type zoom)

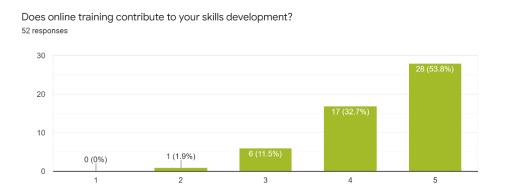
52 responses



Half of respondents were very satisfied with the training materials. However, also 50% of participants were not satisfied and 21% were very unsatisfied. This is an aspect that should be prioritized in future online trainings.

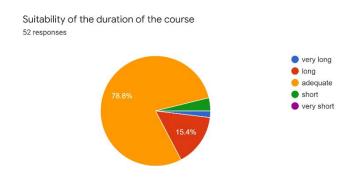


Despite the fact of conducting the training online, 86,5% of respondents stated that it contributed to improve their skills in RS/GIT. A minority of participants (13,4%) declared that the online training was not so positive in terms of skill development.



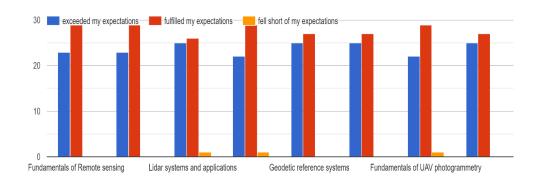
According to the respondents, the training not only provided new flow of information on RS/GIT but also gave participants first opportunity to use programs like sentinel Hub EO Browser, Copernicus OAH etc. At the same time, participation in online trainings allowed them to become more familiar with new solutions in the field of photogrammetry and GIS technologies. They also gained experience on practices from EU countries.

The majority of participants (nearly 80%) considered the duration of the course as adequate, neither too long or too short. For 15% of participants, nonetheless, the training could have shortened a bit.



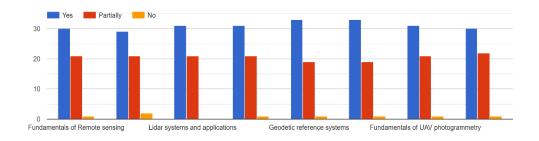
To a very large extent, the content of the online training in RS fulfilled or exceeded the expectations of the participants, which is a positive feature. Only 1 person considered the online training was below his/her expectations.

Did the content fulfill your expectations?

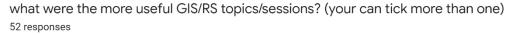


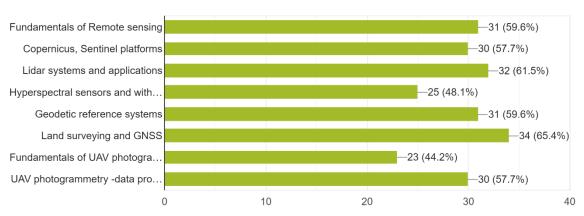
The content also help to improve the knowledge and understanding of participants in applications of specific software for Remote sensing. Around 40% of participants acknowledged to have a partial improved on the topics displayed and delivered. Only 1 participants considered not have benefitted from the online training and 2 for the topic on Copernicus and Sentinel platforms.

Improved my knowledge and understanding of the topic



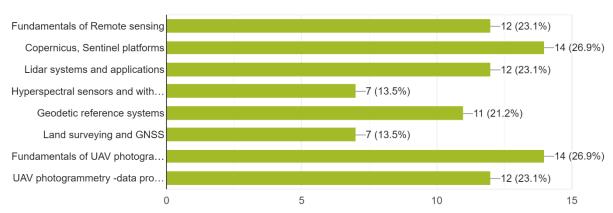
In terms of assessment, the topics that were considered more useful were land surveying and GNSS (declared by 65% of participants) and equally fundamentals of remote sensing and geodetic reference systems.





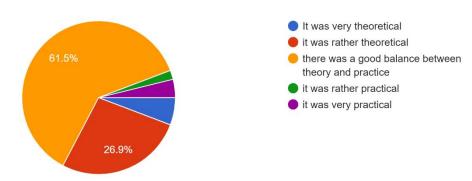
Conversely, the least useful sessions were devoted to fundamentals of UAV photogrammetry and copernicus and sentinel platforms (declared by 26,9% of participants).

# what were the less useful GIS/RS topics/sessions? (your can tick more than one) $_{\rm 52\,responses}$



Looking at the balance between theory and practice, for over 60% of participants the balance was adequate. However, nearly 27% of respondents found the training rather theoretical. This is an aspect that could be considered for further online trainings.

was there a balance between theory and practice? 52 responses



To sum up, what participants like the most from the training was the following:

Very organised training courses in general.

All topics attracted interest to a large segment of participants

They were considered professionally prepared and well taught topics.

For some respondents the more interesting was working with the database.

Conversely, what they like the least from the training was:

Some of the courses (like Copernicus or Sentinel platforms)

Lack of more practical assignements

No transition between topics.

Some participants have problems locally with internet so they could not hear well the lectures.

English language was a problem for some participants.

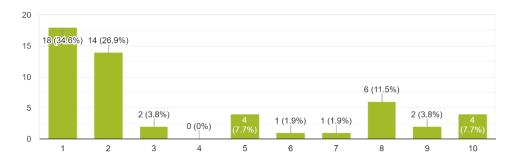
For some respondent, the length of the lectures was too long. However, some respondents also considered that some of the topics were too short.

Some of the software that participants would like to learn in the future is:

ArcGIS, ArcGIS pro, Agisoft, Python, ENVI, 2D and 3D mapping with UAV data, Google Earth Engine used for RS analysis, LULC change detection, SNAP, ERDAS image.

The overall assessment of the training by participants is rather positive. 61% of participants were very satisfied with it while. Around 73% of participants have a positive opinion of the training. Nevertheless, 26,8% were not fully satisfied with the training program for a variety of reasons as previously mentioned.

what is your general assessment of the 4 days course? 52 responses



Some of the recommendations for future trainings would be:

To implement face to face training as much as possible

To improve balance between theory and practice

To add a short break in the middle of lectures

To include short movies/tutorials about practical use of certain software

To include subtitles in russian for videoconferencing